

**ORDINANCE NO. 2013-O-09B**

**WATER CONSERVATION PLAN ORDINANCE**

**AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF MARBLE FALLS, AMENDING DIVISION 4 (WATER CONSERVATION PLAN), ARTICLE II (WATER) CHAPTER 26 (UTILITIES) TO REPLACE THE CITY'S WATER CONSERVATION PLAN IN ITS ENTIRETY WITH A REVISED PLAN THAT CONTAINS VARIOUS UPDATES; PROVIDING FOR FINDINGS OF FACT; IMPLEMENTING AN INCLINED BLOCK WATER RATE STRUCTURE; ESTABLISHING EDUCATION AND PUBLIC INFORMATION ELEMENTS; SPECIFYING CONSERVATION GOALS; PROVIDING FOR SEVERABILITY; REPEALER; EFFECTIVE DATE; AND PROPER NOTICE AND MEETING.**

**WHEREAS**, the City of Marble Falls is legally empowered to enact and amend ordinances for the protection of the health, safety and welfare of its residents and the public through the legitimate use of its police powers; and

**WHEREAS**, pursuant to state law, the City Council hereby replaces its existing Water Conservation Plan with a new Water Conservation Plan; and

**WHEREAS**, the City Council has determined that adoption of the revised plan is in the best interest of the City and its citizens;

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MARBLE FALLS, TEXAS, THAT:**

**SECTION I. PREAMBLE.** All of the above premises are hereby found to be true and correct legislative and factual findings of the City of Marble Falls and are hereby approved, adopted, and incorporated into the body of this Ordinance as if copied in their entirety.

**SECTION II. AMENDMENTS.** The City of Marble Falls Code of Ordinances, Chapter 26, is hereby amended by the repeal of the current Division 4, Water Conservation Plan, and replacing it so that it shall hereafter read in its entirety as follows:

**DIVISION 4. – WATER CONSERVATION PLAN**

**Sec. 26-55.1. - Utility profile.**

- (a) *Water system.* The City of Marble Falls obtains its raw water supply from Lake Marble Falls through a water supply agreement with the Lower Colorado River Authority (LCRA). The City's Utility Department is the managing municipal entity that operates the surface water treatment facility that withdraws raw water from the Colorado River/Lake Marble Falls and treats and delivers the potable water to its retail service

area customers. The City's water utility operates as Texas Commission on Environmental Quality (TCEQ) Public Water Supply System #270026 and serves the area defined by TCEQ Certificate of Convenience and Necessity (CCN) #11137. The City of Marble Falls currently serves a population of 6,700 comprising of approximately three thousand (3,000) connections of which approximately seventy-five (75) percent are residential and twenty-five (25) percent are commercial. The service area boundaries extended to the Subdivision of Highland Hills to the north, south to Texas State High71, east to Manzano Mile and west to 2400 FM 1431. All residential and commercial properties are connected to the water system. The average daily usage for the three (3) past years is 1.5 mgd. Peak demand of 2.90 mgd for the City occurred in August 2012. The projected population for the service area is the following:

Year	Population
2020	10,100
2030	12,600
2040	15,100
2050	16,500
2060	18,200

A central water plant serves the City of Marble Falls; it controls the level in three (3) ground storage tanks, one (1) standpipe, and three (3) elevated storage tanks.

The water system constraints are as follows first: there is a marginal pressure problem in the upper elevations of the City, second in the same upper pressure plane; and there are some undersized water mains which provide marginal fire flows.

The City of Marble Falls has completed installing new water mains south of Lake Marble Falls that feed a one (1) mg elevated storage tower. This storage tower provides water to the newly annexed area and to the newly constructed Scott & White Specialty Clinic. Additionally, the storage tower will service the hospital which has a scheduled completion date of late 2014. This divides the City of Marble Falls into three (3) pressure planes to assure better service. The City of Marble Falls will improve the distribution system with major construction as funding permits,

(b) *Wastewater system.* The City of Marble Falls Wastewater System currently has an average daily flow of 690,000 gallons with a peak monthly flow of thirty-four (34) mg, which occurred in July 2002.

There are approximately five (5) percent of water service connections in the City that are served by private sewage facilities.

A return activated sludge plant currently serves the City of Marble Falls wastewater system. This plant has three (3) clarifiers, an oxidation ditch, and an aerobic digester with a belt press. The plant is approaching seventy-five (75) percent threshold. The City has recently upgrades to convert the process to a reclaimed water system enabling the City to produce Type 1 effluent. The City has begun irrigation of its parks utilizing the treated effluent and saving over 47 acre feet of water annually, reducing the potable water demand. Capital improvements for the coming

years include extending the reclaimed water system to additional parks and sports fields throughout the City to utilize the treated effluent for irrigation.

(c) *Financial data.*

Water Rates:

Residential and commercial customers shall be charged the minimum monthly rates per metered water connection as established in the water/wastewater rate ordinance. These charges are levied in accordance with the size of the meter serving the customer and the type of customer.

The City will implement an inclined block water rate structured as of October 15, 2013 wherein the unit cost of water increases within blocks as water usage increases. The inclined block structure encourages conservation with lower rates for lower volume users and higher rates for higher volume users. Annual audits will be conducted to evaluate promoting conservation. The rate structure does not impact low end users alleviating the burden on low income and fixed income residents.

Water rates for the sale of bulk water will be at the rate as established in the water/wastewater ordinance. The purchaser is responsible for providing a container approved for transportation of the water. The sale of bulk water will not be allowed for resale purpose to residents outside the City limits once Stage 3 is reached or any stage beyond that, under the drought contingency plan.

**Sec. 26-55.2. - Plan elements.**

- (a) *Education and Public Information. Education:* The City will make available water conservation education materials for its customers on an on-going basis. Such information shall be provided to customers through various mediums, including but not limited to: utility bill inserts, pamphlets provided at public facilities, direct mailings, the City website, social media, school presentations, and periodic articles published in the local designated newspaper. When appropriate, the City shall also coordinate education efforts with local water suppliers, agencies, and regulators to promote water conservation education. Additionally, the City will conduct or participate in at least one (1) annual water conservation event or activity.

*Public Information:* The City has instituted a public information radio campaign, timed to correspond with the peak summer demand, and to notify the public of the need for water conservation as well as to provide tips for the most effective ways to conserve water. Additionally, the City has partnered with the Texas Water Development Board (TWDB) to implement the state wide public awareness program, Water IQ. The City currently utilizes literatures, web links and informational packets to customers with material compiled by the TWDB to raise awareness of the need for water conservation in our community. New utility and change-of-service customers will be provided with water conservation literature as well as public service information regarding the status of the drought response stage during the application process. The same information will be made available to exiting utility customers through the City website and at City Hall. Water conservation information for

“Water Saving Methods that can be practiced by the Individual Water User” is also available in the office of the City manager.

- (b) *Plumbing codes.* The City of Marble Falls currently adopted version of the International Plumbing Code and the International Energy Conservation Code which requires water saving plumbing devices on all new construction. State and Federal laws require that homes constructed after 1992 have low-flow (less than three (3) gallons per minute) showerhead, faucet aerators and ultra-low flush (1.6 gallons per flush) toilet installed.
- (c) *Retrofit program.* The City will make available, through its education and information programs, information for water customer use when purchasing and installing plumbing fixtures, lawn watering equipment or water using appliances. The advertising program will inform existing users of the advantages of installing water saving devices. City
- (d) *Water Conservation Oriented Price Structure.* The City will implement an inclined block water rate structure as of October 15, 2013, where in the unit cost of water increases within blocks as water usage increases. The inclined block structure encourages conservation with lower rates for lower volume users and higher rates for higher volume users. Annual audits will be conducted to evaluate promoting conservation. The rate structure does not impact low end users alleviating the burden on low income and fixed income residents.
- (e) *Universal metering.* All water customers, including utility, City offices, and public facilities, are presently metered. Also, master meters are currently installed and periodically calibrated at all existing water sources. All new construction is separately metered.

The City, through its computer billing system, currently monitors water consumption and inspects meters, which vary from its previously established norms. In addition, the City will adopt a meter maintenance and replacement program as follows:

- (1) Production (master) meters—test once a year.
- (2) Meters larger than one (1) inch—test once a year.
- (3) Meters one (1) inch or smaller—test once every ten (10) years.

Through a successful meter maintenance program coupled with computerized billing, water audits, timely repairs, and leak detection program, the City of Marble Falls will keep unaccounted-for water losses below fifteen (15) percent.

- (f) *Landscape Irrigation Conservation Initiatives.* In order to reduce the demands placed on the water system by landscape watering, the City will encourage customers and local landscaping companies to utilize water saving practices in installation and the maintenance of landscaping for residential and commercial institutions. Some of the methods to be promoted are as follows:
  - (1) Encourage landscape architects to use native and adapted plant materials that can tolerate periods with low water input and require less fertilizers and pesticides to maintain, as well as water efficient irrigation system design and technologies, such as hydro zones to group plant materials of similar water needs.
  - (2) Encourage licensed irrigation contractors to install all irrigation systems with water efficient features, such as:

- a. Proper irrigation system design techniques to match the landscape design, accommodate prevailing wind patterns, and minimize overspray onto hardscapes;
  - b. Sprinklers that emit large drops rather than fine mist;
  - c. Irrigation controllers that offer multiple start times, are capable of running multiple programs, have a water budget feature, and are rain or moisture sensor capable;
  - d. Rain or moisture sensors to prevent irrigation system operation during rainfall events;
  - e. Drip irrigation where possible, and in all landscaped areas less than ten (10) feet wide (medians, parking islands, etc.).
- (3) Encourage commercial establishments to use drip irrigation for landscape watering, when practical, and to install only ornamental fountains that recycle and use minimal quantities of water.
  - (4) Encourage the utilization of separate irrigation meters in an effort to more effectively monitor and manage landscape irrigation usage.
  - (5) Partner with LCRA to obtain training for utility staff to conduct no cost evaluations of landscape irrigation systems for citizens and provide citizens with information regarding the irrigation technology rebate programs.
- (g) *Leak detection and repair.* The City conducts monthly water system audits in order to track unaccounted for water. Current loss is calculated to be at 8.0%. City maintenance technicians also conduct visual inspections at meters on a monthly basis in order to monitor leaks. Additionally, through its computerized billing program the City can readily identify excessive water use determined to be a water leak. When identified, leaks are repaired immediately. In accordance with the requirements set forth by the LCRA and the Texas Water Development Board, the City performs a comprehensive water system audit annually.
  - (h) *Recycle and reuse.* The City currently reuses all wastewater effluent produced at the City's wastewater treatment facility for irrigation of four city parks as well as a coastal hay farm. Future capital improvement projects will allow for additional City owned parks and sports facilities as well as school sports facilities to be irrigated with treated effluent.
  - (I) *Drought contingency plan.* When conditions indicate a possible water shortage by drought or any other event that could occur to the water supply that would create an emergency situation, the City shall enact the drought contingency plan, Division 3 of Article II of Chapter 26 of the City's Code of Ordinances. The City prohibits inefficient water management under the various drought response stages in an effort to conserve water.
  - (j) *Implementation/enforcement.* The City Manager will act as the administrator of the water conservation program. The administrator will oversee the execution and implementation of all elements of the program. The City Manager will be responsible to supervise the keeping of adequate records for program verification. The administrator will also insure that the water conservation plan is properly updated and filed every five (5) years with the Lower Colorado River Authority (LCRA) and the Texas Commission on Environmental Quality (TCEQ).

The City will adopt the final approved plan and commit to maintain the program for the duration of the City's financial obligation to the State of Texas.

(k) *Annual report.* In addition to the above outlined responsibilities, the administrator will submit an annual report to the TWDB on the water conservation plan. The report will include the following:

- (1) Public information which has been issued.
- (2) Public response to plan.
- (3) Effectiveness of water conservation plan in reducing water consumption by providing production and sales records.

The City will submit the annual Water Conservation Implementation report to the TWDB, and TCEQ.

(l) *Contracts with other political subdivisions.* The City will, as part of contract for sale of water to any other political subdivision, require that entity to adopt applicable provisions of the City's water conservation and drought contingency plan or have a plan in effect previously approved by the TCEQ that is at least as stringent as the City's. These provisions will be through contractual agreement prior to the sale of any water to the political subdivision.

Conservation Goals. The quantitative goals as required by Title 30, Texas Administrative Code, Chapter 288 (30TAC 288) are stated below. The city's annual average water use is 223.9 gpcd. The City's annual water loss is 8.0%.

(1) Five Year Conservation Goals

- a. Reduce the average per capita day water use by 2.0% by 2019 with a goal of achieving 221.9 gpcd
- b. Complete reuse infrastructure to allow for additional City owned parks and sports fields to be irrigated with treated effluent.
- c. Conduct an annual survey of scheduled portions of the water distribution system with acoustical leak detection and ultrasonic flow meter testing equipment as an extra measure in reducing water loss.
- d. The City will evaluate offering irrigation audits to residential and commercial customers provided by a City staff trained irrigation auditor.
- e. Convert the City's meters to automated meter readers to establish increased efficiency in metering treated water.
- f. Reduce loss by 1.0% to 7.0% annually.

(2) Ten Year Conservation Goals

- a. Reduce the average per capita day water use by 2.0% between 2014 and 2019 with a goal of achieving 219.9 gpcd,
- b. Utilize all available treated effluent for irrigation throughout the City.

c. Reduce loss by 1.0% to 6.0% annually.

**SECTION III. REPEALER.** All ordinances or parts of ordinances in force when the provisions of this ordinance becomes effective which are inconsistent or in conflict with the terms and provisions contained in this ordinance are hereby repealed, but only to the extent of any such conflict.

**SECTION IV. SEVERABILITY** If any section, subsection, clause, phrase or provision of this Ordinance, or the application thereof to any person or circumstance, shall to any extent be held by a court of competent jurisdiction to be invalid, void or unconstitutional, the remaining sections, subsection, clauses, phrases and provisions of this Ordinance, or the application thereof to any person or circumstance, shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

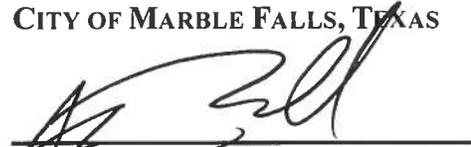
**SECTION V. EFFECTIVE DATE.** This Ordinance shall be and become effective immediately upon and after its passage and publication as provided by law.

**SECTION VI. PROPER NOTICE AND MEETING.** It is hereby officially found and determined that the meeting at which this ordinance was passed was open to the public as required and that public notice of the time, place and purpose of said meeting was given as required by the Open Meetings Act, Chapter 551 of the Texas Government Code. Notice was also provided as required by Chapter 52 of the Texas Local Government Code.

**ADOPTED AND APPROVED** on this 17<sup>th</sup> day of September 2013 by a vote of the City Council of the City of Marble Falls, Texas.

**SECOND READING:** Waived

CITY OF MARBLE FALLS, TEXAS

  
George Russell, Mayor

ATTEST:

  
Christina McDonald, City Secretary



APPROVED AS TO FORM:

  
Patty Akers, Attorney